Statistics Can Count in National Security

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(Acquisition, Technology, & Logistics)

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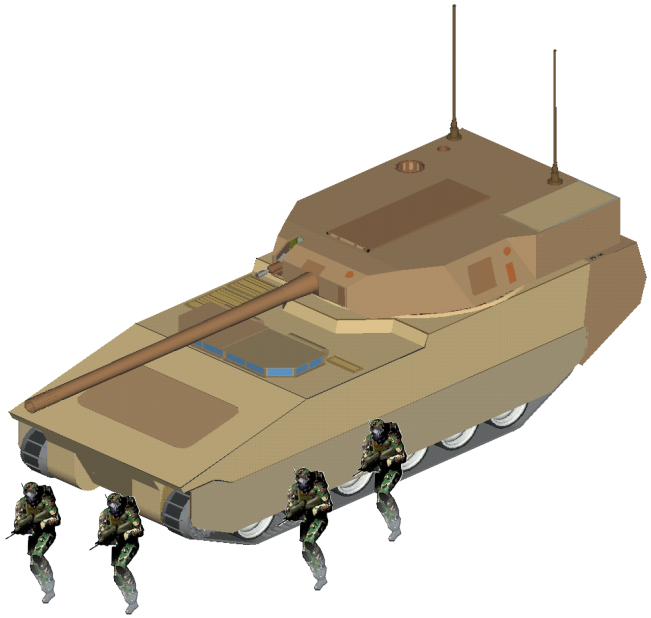
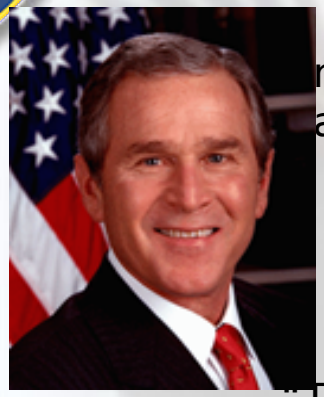
Agenda

- Overview
- Tools for the Warfighter
- Tools for the Business Manager
- Challenges and Homework

Overview

U.S. AIR FORCE





"The United States will … transform America's national security institutions to meet the challenges and opportunities of the twenty-first century."

»**President George W. Bush**
September 2002

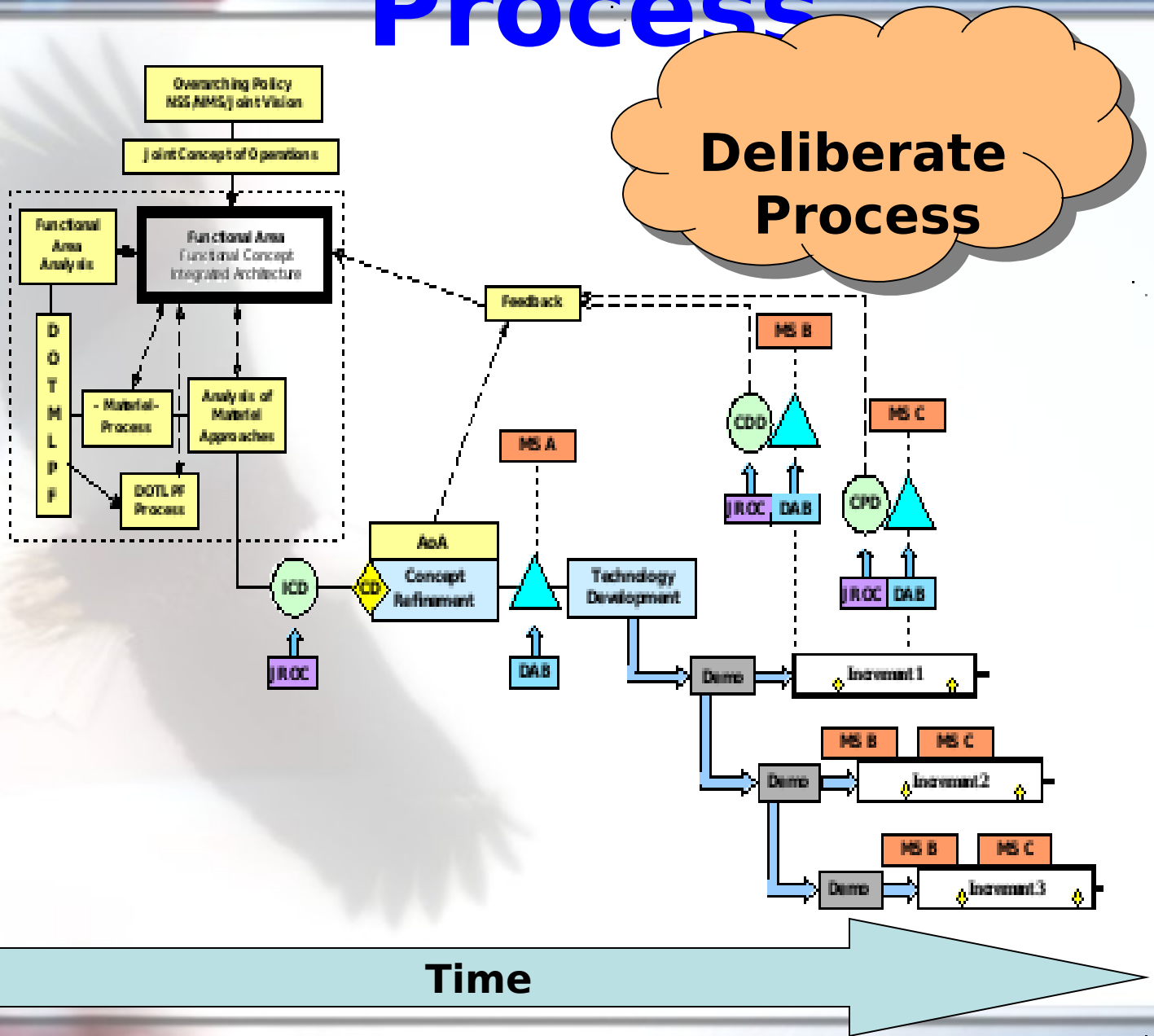
"The Department currently is pursuing transformational business and planning practices such as adaptive planning, a more *entrepreneurial, future-oriented capabilities- based resource allocation process, accelerated acquisition cycles built on spiral development, out-put based management*, and a reformed analytic support agenda."

»**Secretary of Defense Donald Rumsfeld**
Transformation Planning Guidance
April 2003

For the Warfighter . . .

- **Flexibility**
- **Capability**
- **Reliable Logistics**

The Acquisition Process



Acquisition Flexibility

- An Efficient Industrial Base
- The Pace of Technology
- The Pace of Threats

Flexibility Examples

- Joint Rapid Acquisition Cell
- Quick Reaction Special Projects
- Rapid Fielding Initiative
- Joint Capability Technology Demonstrations

Thermobaric Weapon

Deployed & Employed in Operation Enduring Freedom (OEF) in Afghanistan

Chemistry to Fielded System – 90 Days

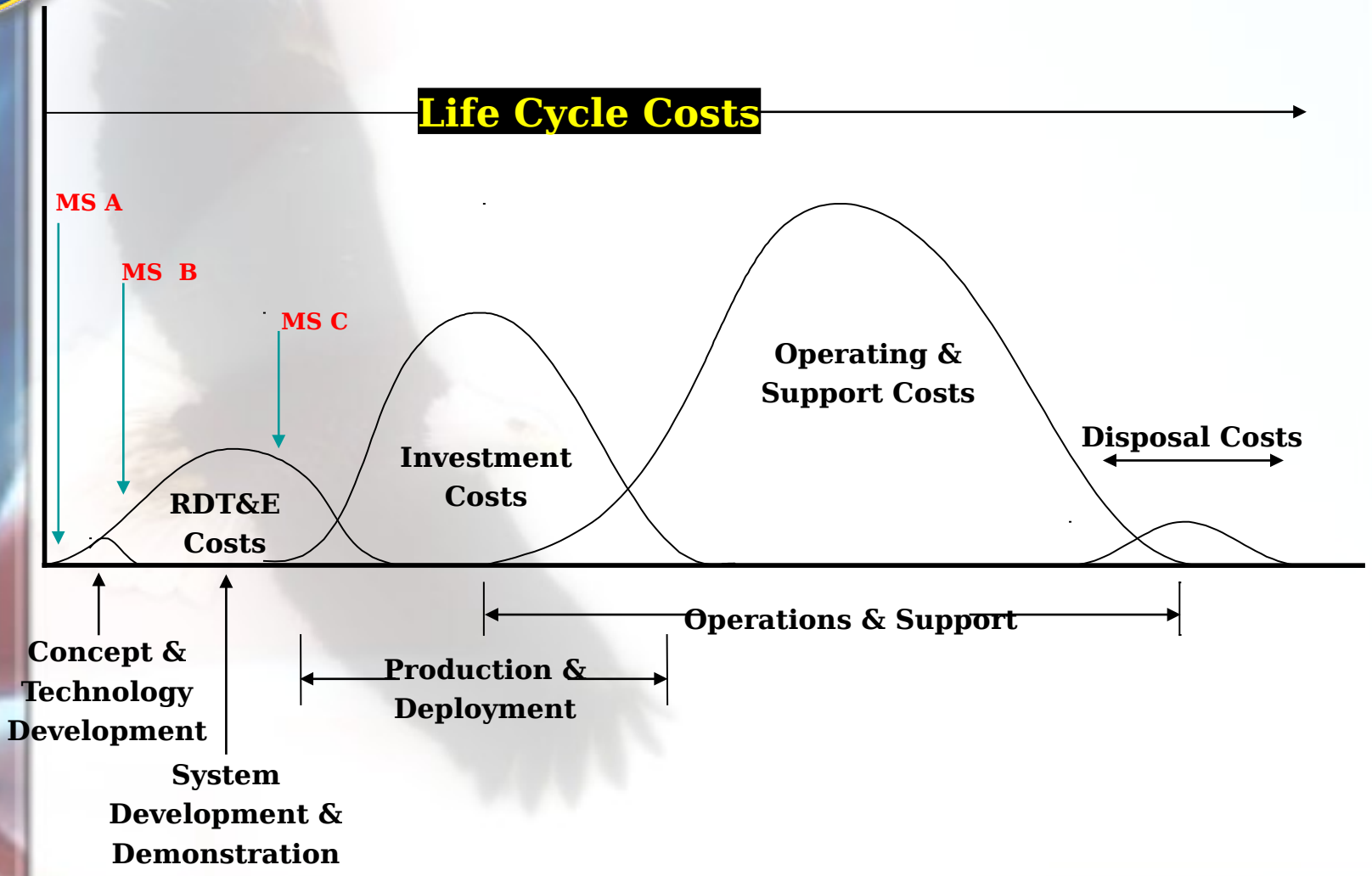
Flexibility Examples

- Joint Rapid Acquisition Cell
- Quick Reaction Special Projects
- Rapid Fielding Initiative
- Joint Capability Technology Demonstrations

Providing Capability

- **Impacted by Trends in U.S. Education**
- **Lacking Statistical Knowledge**
- **Testing Critical to Acquisitions**

Weapon System Timeline and Cost Categories



Logistics

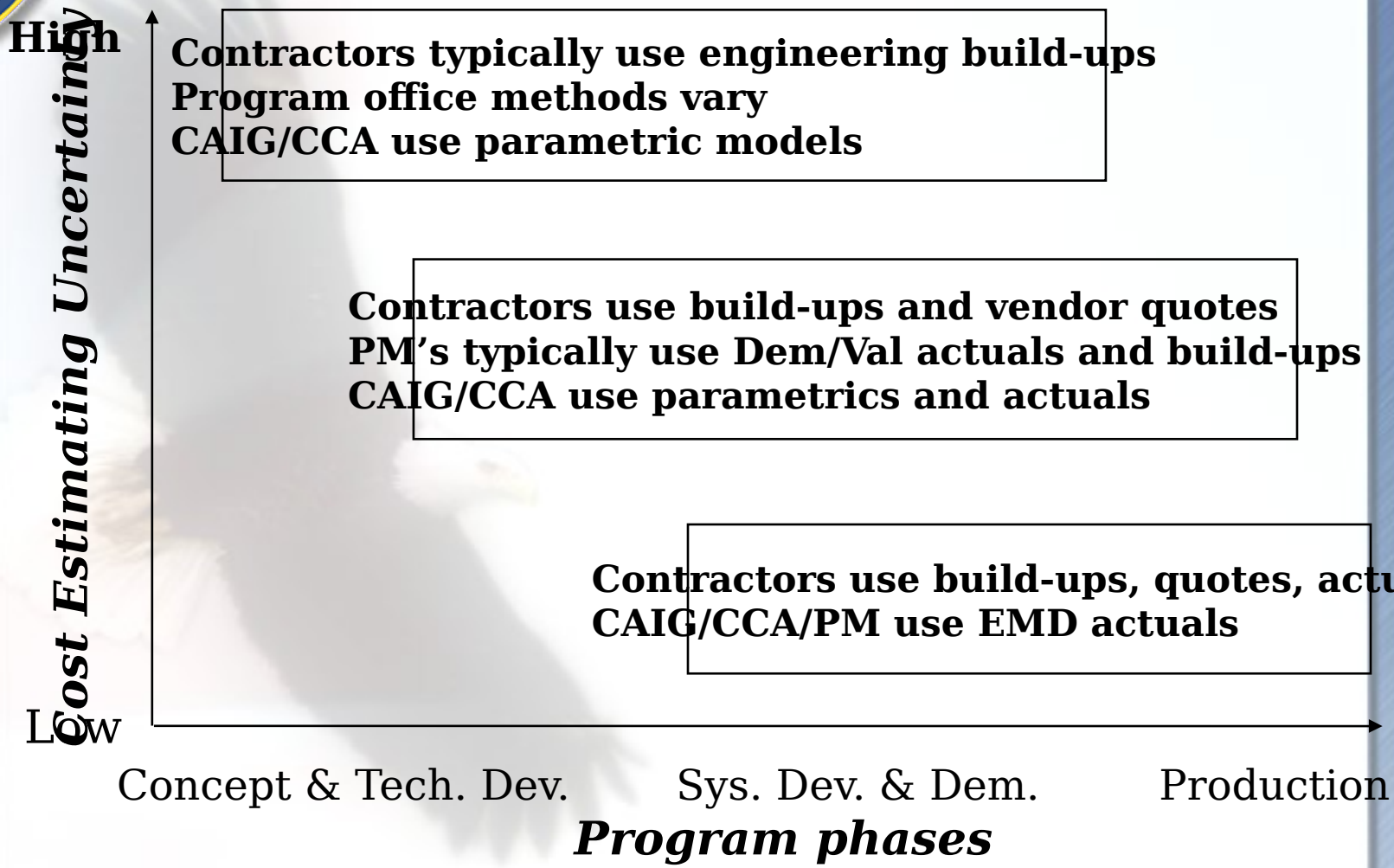
- ✓ RFID
- ✓ Enterprise Integration
- ✓ Expand End-to-End Policies
- ✓ Reliable Delivery
- ✓ Weapon System Support
- ✓ Sustain Weapon System Material Readiness
- ✓ Corrosion Control

Logistics: Integrated and Efficient

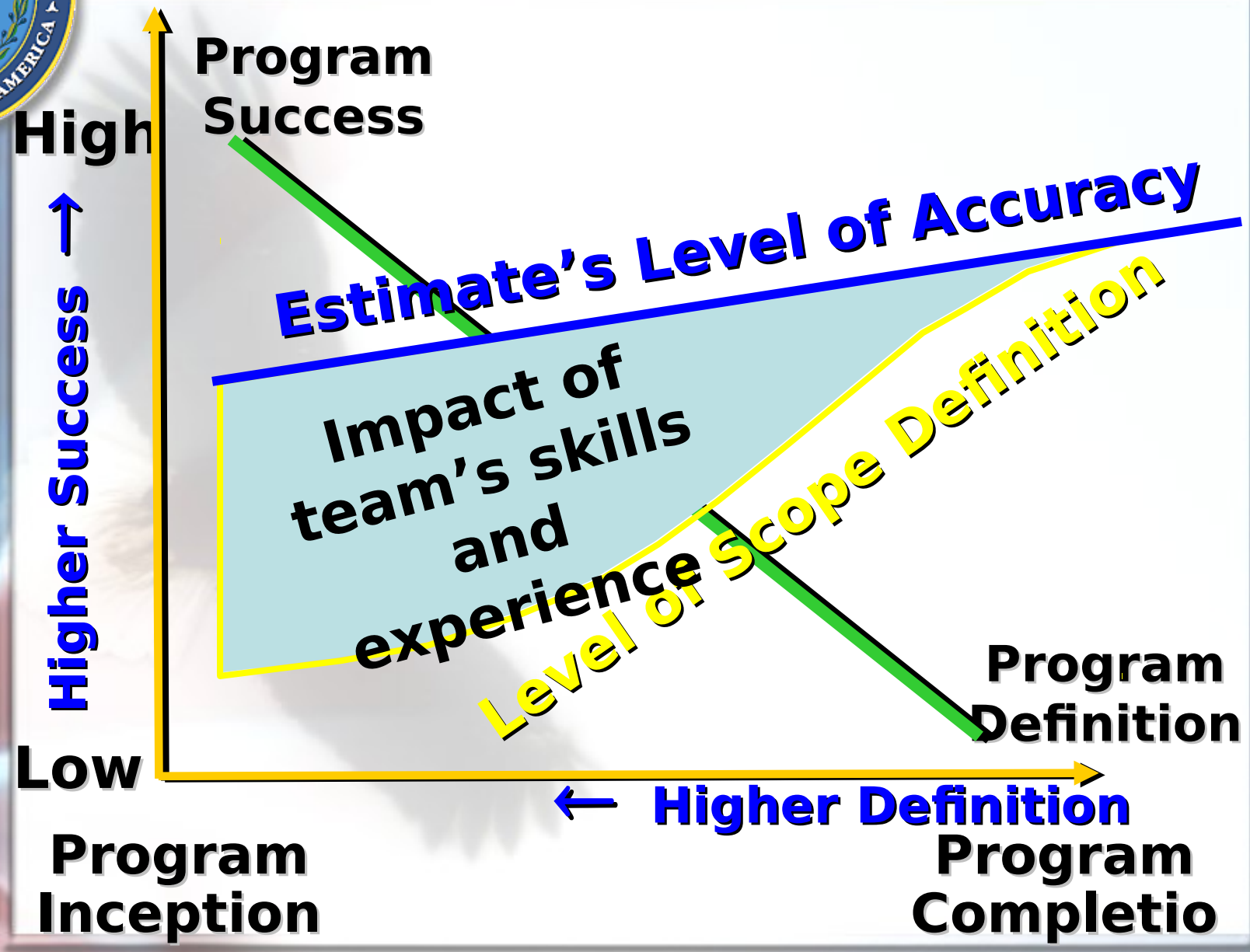
For the Business Manager . . .

- **Cost Estimating**
- **Business Management Modernization Program (BMMP)**
- **Data/Information**
  - Defense Acquisition Management Information Retrieval (DAMIR)
  - Military Equipment Valuation (MEV)
  - Earned Value Management (EVM)

Current Cost Estimating Techniques



Level of Accuracy



Business Management Modernization Program (BMMP)

Mission

- Support the Warfighter with world-class business operations

Vision

- Managing DoD's support operations in an efficient, business-like manner, thus optimizing the combat support infrastructure
- Delivering resources to the Warfighter by using the most effective business processes
- Providing accurate, reliable, and timely financial information, affirmed by unqualified audit opinions, to decision makers at all levels of DoD

Goals

- Provide timely and accurate information for business management
- Enable improved business operations

Largest Government business transformation effort

How Big is BMMP?

- **5.4M employees, service members, retirees and dependents**
  - Paychecks and W-2s
  - Personnel records and actions
  - Medical and Dental records, appointments, admissions and discharges
  - Training records, plans, and scheduling classes
  - Travel requests, tickets, vouchers
- **$400B+ /Year**
  - 267 Appropriations
  - 124 Million accounting transactions
  - 11.2 Million invoices
- **$700B+ in Assets**
- **600,000 Buildings at 6,000 locations in 146 Countries**
  - Treaties, Local Laws and Regulations
  - Leasing arrangements
  - Security
  - Environmental liabilities
  - Real property inventories
- **1,312 Major weapons systems**
  - 4.6 Million parts and supplies managed
- **150+ Federal Source Laws and Regulations (Ex. Title 5, 10, 32, 37)**
  - 4,200+ Specific requirements from source laws
- **4,000 Systems … and Counting**
  - Different standards and interpretations of rules and requirements

BMMP Focus

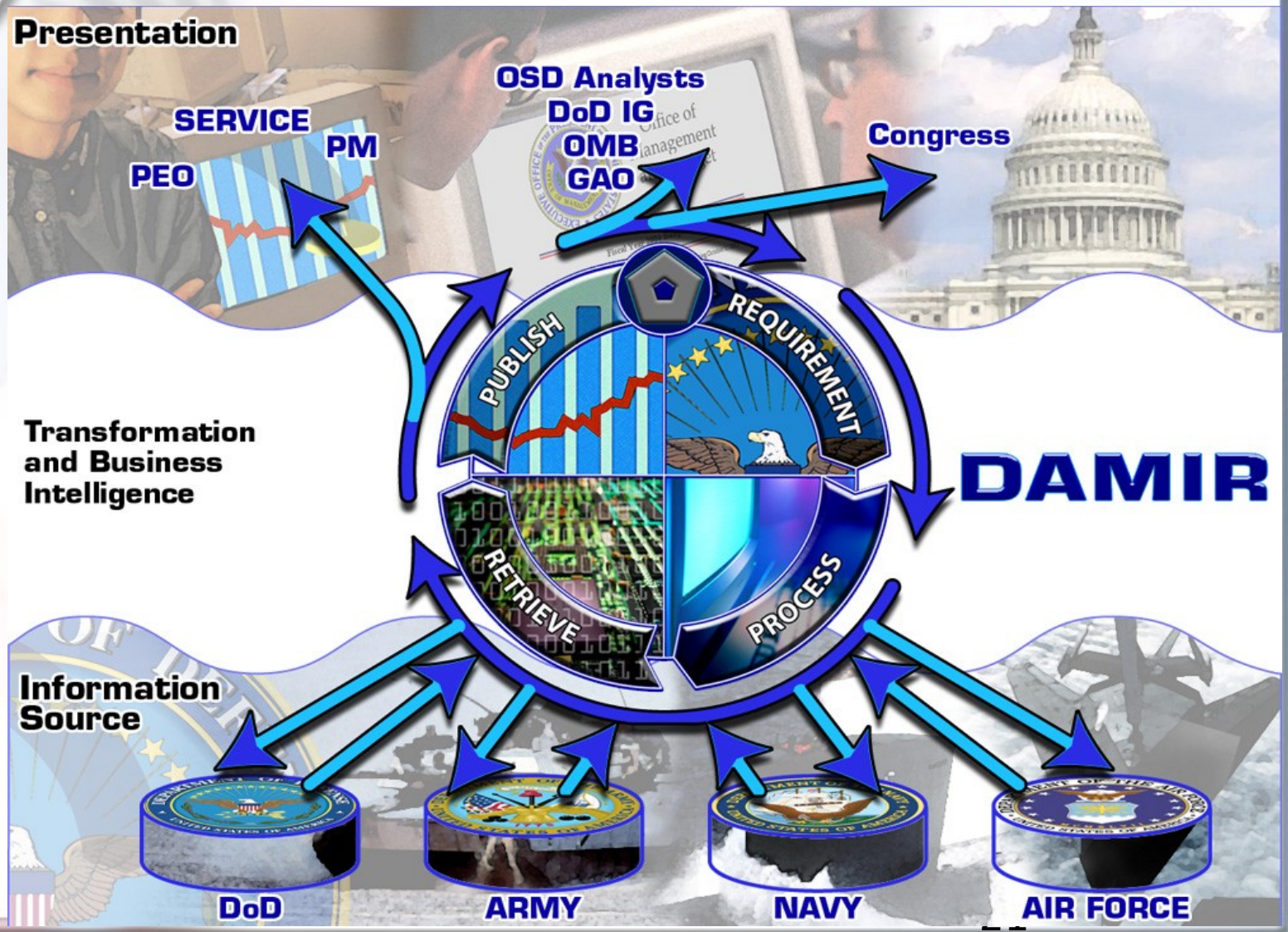
- **Re-engineer the processes and identify the information requirements necessary to implement a modern net-centric business environment that supports the Warfighters' needs.**
- **Facilitate rapid delivery of DoD Enterprise Capabilities that are already under the authority of the OSD organization.**
- **Support service- or component-specific activities by streamlining approval processes to ensure rapid time-to-value, while enforcing compliance to policy such as the Standard Financial Information Structure and DoD Enterprise-level processes.**

Defense Acquisition Management Information Retrieval (DAMIR)

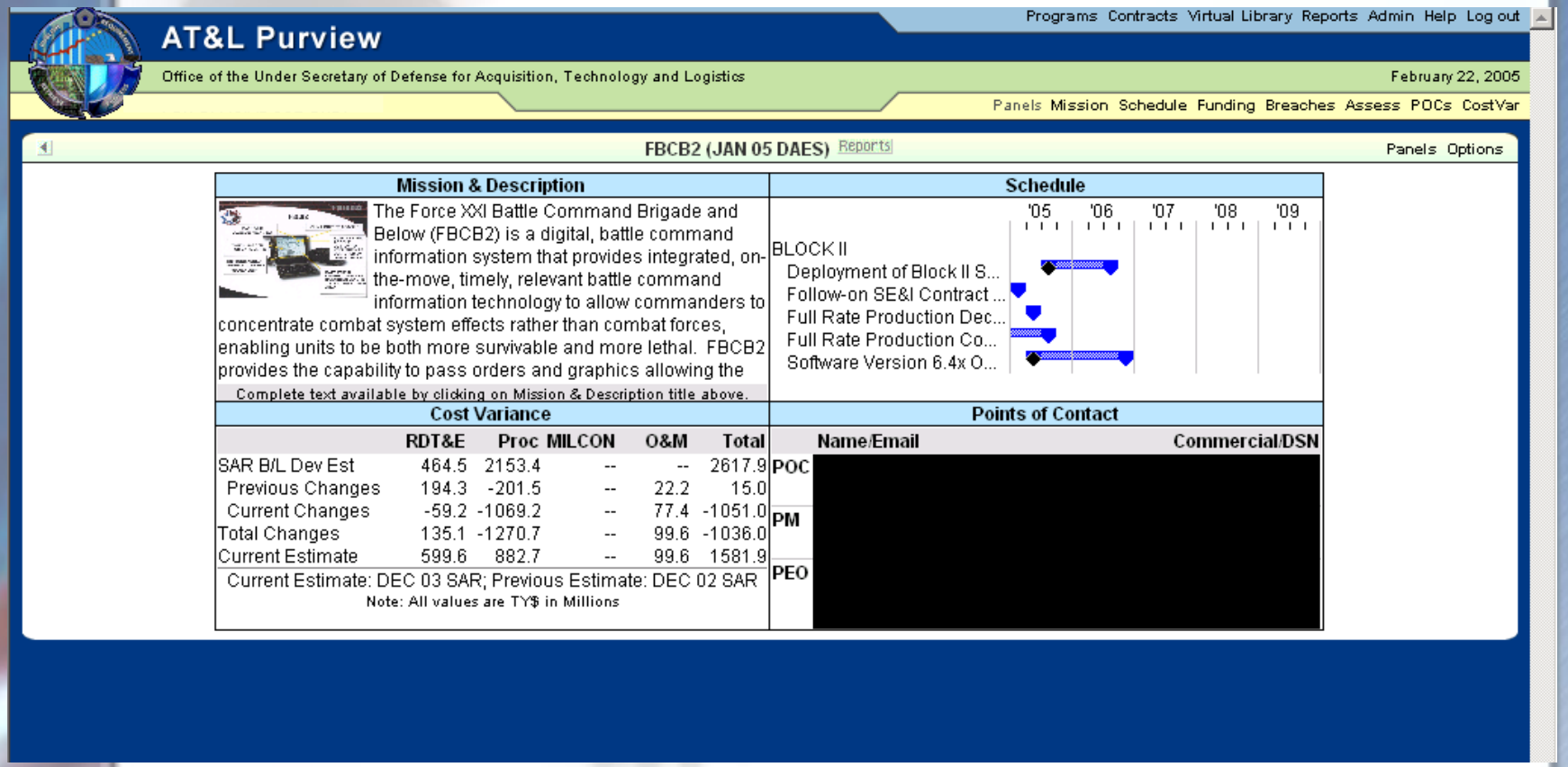
A capability that….

- Enables OSD to better perform its acquisition oversight role
- Is responsive to OMB and Congressional needs
- Leverages existing data sources
- Easily enables improvements to new/better data
- Reduces non-value added workload up and down the chain
- Promotes net-centric information principles

Acquisition Oversight Vision



DAMIR Purview – FBCB2



AT&L Purview

Programs Contracts Virtual Library Reports Admin Help Log out

Office of the Under Secretary of Defense for Acquisition, Technology and Logistics

February 22, 2005

Panels Mission Schedule Funding Breaches Assess POCs CostVar

FBCB2 (JAN 05 DAES) Reports

Panels Options

Mission & Description

The Force XXI Battle Command Brigade and Below (FBCB2) is a digital, battle command information system that provides integrated, on-the-move, timely, relevant battle command information technology to allow commanders to concentrate combat system effects rather than combat forces, enabling units to be both more survivable and more lethal. FBCB2 provides the capability to pass orders and graphics allowing the

Complete text available by clicking on Mission & Description title above.

Schedule

'05 '06 '07 '08 '09

BLOCK II
Deployment of Block II S...
Follow-on SE&I Contract ...
Full Rate Production Dec...
Full Rate Production Co...
Software Version 6.4x O...

Cost Variance

	RDT&E	Proc	MILCON	O&M	Total
SAR B/L Dev Est	464.5	2153.4	--	--	2617.9
Previous Changes	194.3	-201.5	--	22.2	15.0
Current Changes	-59.2	-1069.2	--	77.4	-1051.0
Total Changes	135.1	-1270.7	--	99.6	-1036.0
Current Estimate	599.6	882.7	--	99.6	1581.9

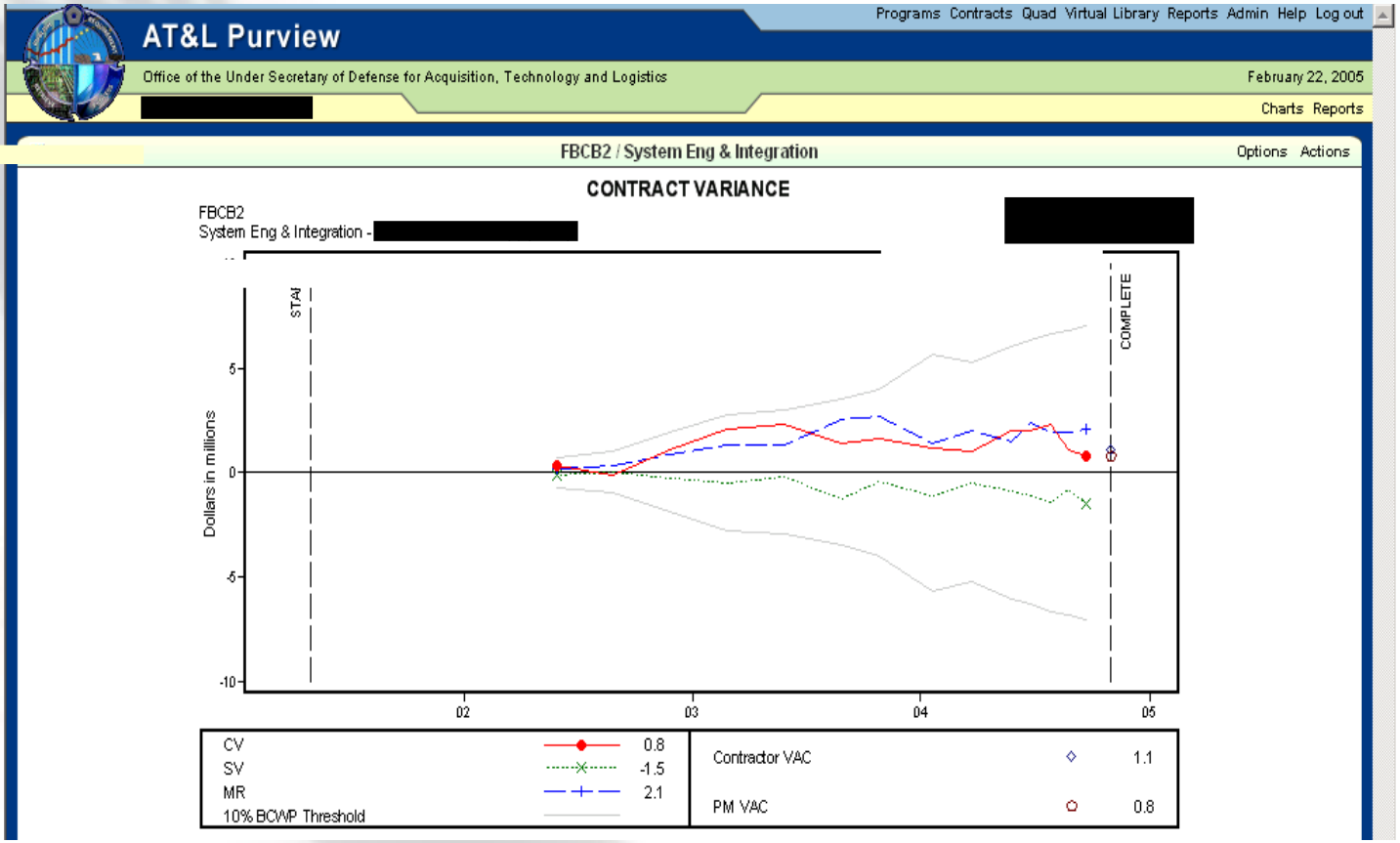
Current Estimate: DEC 03 SAR; Previous Estimate: DEC 02 SAR

Note: All values are TY$ in Millions

Points of Contact

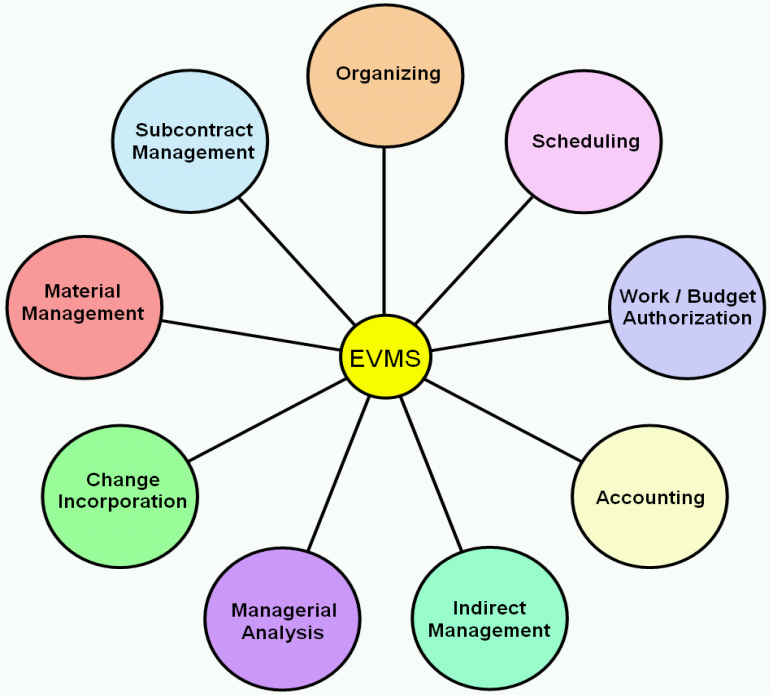
	Name/Email	Commercial/DSN
POC	[redacted]	
PM		
PEO		

DAMIR Purview – FBCB2



Earned Value Management (EVM)

- An Integrated Management System That Measures Progress Against Established Baselin
- Widely Used Best Practice
- Governed by indust standard (ANSI/EIA-7
- Addresses Nine Management Processes



MEV Status

- Number of programs: 1,055
- Valuations completed through February 2005: 547
- Valuations in-progress: 147
- FY2005 program valuations goal (cumulative): 968
- Accounting systems interfaced with: 16
- Property Accountability systems interfaced with: 28
- Data elements in accounting/accountability systems: >600

MEV Example – F/A-18

Program Balances ($M)

Estimated Cumulative Cost of F/A-18 E/Fs in Service	A	$12,404.5
Accumulated Depreciation	B	$1,974.7
Net Book Value of F/A-18 E/Fs in Service	C = A - B	$10,429.8
Total Work-in-Process	D	$3,381.3
Cumulative Cost of F/A-18 E/Fs in Service and Work-in-Process	E = A + D	$15,785.7
Annual Depreciation Expense	F	$618.2

Estimated Cost per F/A-18 E/F

Total Estimated Program Costs	G	$28,170.1
Total Number of F/A-18 E/Fs	H	352
Estimated Cost per F/A-18 E/Fs	I = G / H	$80.0

Privacy Issues

- Technology and Privacy Advisory Committee
- Implementation emphasis in DoD

Privacy Issues

- **Must not Sacrifice Liberty for Security**
- **Data Mining**
- **Concerns**

" . . . they that can give up essential liberty to purchase a l temporary safety deserve neither liberty nor safety."
Benjamin Franklin

Challenges and Homework

- **Challenge: Managing by portfolio**
- **Homework: Development of meaningful statistical indicators of the health and progress of Defense acquisition programs both in the aggregate and by capability area**

Challenges and Homework

- **Challenge: Modeling and simulation improvement**
- **Homework: Improved/refined statistical techniques that allow integrated comparisons of individual weapon systems**

Challenges and Homework

- **Challenge: Capability trade-offs**
- **Homework: Development and application of effective techniques and metrics that allow meaningful comparison of dissimilar capabilities**

Challenges and Homework

- **Challenge:**
  - Netcentricity goals bring a whole new set of challenges for the cost community.
  - Electronic-intensive systems integrated based on major software development programs.
- **Homework:**
  - The cost community needs to place greater emphasis on collection of costs related to both areas.

Challenges and Homework

- Challenge:

The Department established 6 pilot programs to support its Performance Based Logistics (PBL) initiative. Current cost accounting systems are conducive neither to the collection of platform-specific costs nor our ability to confirm that estimated savings and cost avoidance is actually occurring.

- Homework:

  - The cost community needs to develop such structures in close coordination with program and budget offices.
  - The cost community needs to work with the logistics community to ensure that the requisite level of visibility into contractor costs is retained.

Conclusion

- **Everything we do is geared toward the Warfighter; there is nothing more important.**

BACK-UPS

The Acquisition Workforce

- **Defense Acquisition Workforce Improvement Act (DAWIA)**
- **Science, Math and Research for Transformation (SMART)**

Concerns Relative to EVM

- Industry Concerns
  - Erosion of avenues of communication and problem resolution
  - Conflicting contractual requirements
  - Duplicative management systems reviews
  - Unique system surveillance oversight activities
  - Proliferation of independent approaches
  - Declining government experience and resources
- DoD Concerns
  - Diverse implementation of EVM among and within companies
  - Maturity of industry infrastructure to support “ownership” of EVM
  - Lack of institutionalization of EVM as an integral program management process
  - Varying levels of confidence in reported data
  - DoD program managers taking actions in response to industry’s maturity issues

Benefits of Earned Value

- Means to quantify and measure contract performance — provides cost and schedule visibility
- Early warning system for deviations from plan
- Sound and objective basis for considering corrective actions
- Mitigator of risk associated with cost and schedule overruns
- Forecast of final cost and schedule outcomes.

DAMIR

- **Structured Data (Purview)**
  - Web-based application that accesses Acquisition information from disparate sources.
  - Consists of presentation layer, web services data “pull” software, and change management.
  - Pull data from Services.
  - Users share the same data..
  - Access provided to OSD, Joint Staff, Services, Program Offices and Congress.
- **Unstructured Data**
  - Virtual Library.

Military Equipment Valuation (MEV)

- **Vision**
  - Military equipment is properly accounted for and reported in time to be of use to decision makers and for financial reporting.
- **Mission**
  - Identify and lead the development of short/mid-term and long term solutions to comply with Governmental Accounting Standards. Solutions include: policies, procedures, business enterprise architecture, requirements development and systems.
- **Goals**
  - Determine the value of military equipment, such as aircraft, ships, combat vehicles, and weapons, and include this information in the periodic financial statements prepared by the DoD.

"DoD has a long way to go to ensure that our acquisition (and sustainment) process achieves the appropriate jointness and interoperability needed in the 21st Century…As we move forward with the QDR, we absolutely must transform the acquisition (and sustainment) process."

SecDef Rumsfeld

October 21, 2004

Need an adaptive and deliberate acquisition processes

Acquisition Excellence With Integrity

- ✓ **Bring Joint Capabilities Perspective to Acquisition**
  - **Conduct Senior Leadership Reviews for each Functional Capability Area**
  - **Re-structure PDM to Enforce Results of Senior Leadership Reviews in the Resource Process**
  - **Transition from "System Focused" to Capabilities-Based DAES Reviews**
- ✓ **Increase Accuracy and Credibility of Cost Estimates**
- ✓ **Shorten Acquisition Cycle Time**
  - **Increase use of evolutionary acquisition including spiral development**
  - **Maximize use of mature and commercial technology**
  - **Expand use of technology demonstrations (ACTD/ATD) - enter acquisition process "closer to production".**

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Budgeting to CAIG Estimate

- Budgetary instructions to Services states:
  "In order to achieve program stability and avoid cost stretch-out, [the Services shall] properly price programs at not less than levels estimated by the Cost Analysis Improvement Group"
- New guidance has a few "execution" issues:
  - CAIG has been staffed and organized primarily to perform episodic reviews at milestones (and fit in other duties)
  - Continuous maintenance of program estimates generally not done
    - -Thus, demand by Services for current CAIG POM numbers often problematic
  - Demand for acquisition milestone reviews continues unabated
- Final resolution not clear
  - In the short run, CAIG is doing the best it can to
  -

AT&L Supports Funding to Best Estimate Based on "Credible" Cost